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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/764,609
Filing Date: January 17, 2001
Appellant(s): MALACKOWSKI ET AL.

MAILED

SEP 20 2005

Group 3700

J. William Frank, III
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 8, 2005 appealing from the Office action mailed January 26, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,617,857	CHADER ET AL	4-1997
6,453,190	ACKER ET AL	9-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3-23, 25-29, 31-34, 80-100, 102, 105 and 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chader et al. (U.S. Pat. 5,617,857).

Regarding claim 1, Chader et al. discloses an instrument comprising a housing (32, Fig.2 or 50, Fig.3), a plurality of light emitting diodes coupled to the housing (20, Fig.2,col.6, lines 61-63) and being adapted to fire independently (Fig.2, each light emitting diode 20 is independently connected to the controller 44 with a dedicated signal line and thus is "adapted to fire independently"), a memory circuit (36, Fig.2) for storing information related to the instrument (col.6,lines 29-44), and a "transceiver" (signal wires show in Figure 2 as lines between the housing 32 and the system 14) adapted to communicate bidirectionally between the instrument and the system (col.6, lines 45-60). The instrument transmits information stored on the memory circuit in response to a received signal from the system (14) (col.6, lines 49-56).

Chader et al. discloses hard wired transmission of signals and therefore fails to teach that the disclosed transceiver is *wireless*, that the disclosed bidirectional communication is *solely through a wireless communication system*, and that the disclosed transmission of stored

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information in response to the received signal occurs *when the smart instrument is placed within a field of detection*. All three of these missing features are directly related and affected by the type (i.e., wired or wireless) of communication used to transmit the signals.

The Examiner takes the position that the general concept of and common understanding of wireless transmission is old and well known in the signal transmission art and is well within the level of ordinary skill. The Examiner further takes the position that one of ordinary skill would readily recognize that there are a limited universe of potential options for signal transmission: wired (hard-wired) and wireless. It has been previously held in the court that where there is a limited universe of potential options, the selection of any particular option would have been obvious to one of ordinary skill in the art. In re Jones, 412 F.2d 241, 162 USPQ 224 (CCPA 1969). Since one of ordinary skill in the art is limited to either wireless or hard wired transmission of signals and, at the time of the invention, the general knowledge of wireless transmission was notoriously well known, readily accessible, and used (e.g., wireless phones, wireless LANs, etc.), the selection of either known option would have been obvious to the skilled artisan. One would have been *motivated by the inherent desirable features of using wireless transmission over wired transmission*. For example, wireless transmission would be desirable to eliminate a binding attachment between components allowing free movement and less entanglements.

Such modification would eliminate the signal wires of Chader et al., making the transceiver *wireless*. In addition, since bidirectional communication previously existed in Chader et al., the elimination of the wires and use of a wireless transceiver system would inherently be required to transmit signals *bidirectionally* for proper operation of the Chader et al.

device. Coincidentally, the communication would be *solely* wireless since it would not make much sense to wirelessly transmit some signals and transmit others over a hard wire (this would defeat the purpose of making it wireless). Furthermore, a wireless system would inherently have a "field of detection" since an inherent property of wireless signals includes a boundary or a point at which the signals can not be usefully detected. Thus, the instrument could only transmit information when *placed within a field of detection*.

Therefore, all claim elements of claim 1 are met with the obvious modification of Chader et al. as set forth above.

Regarding claim 29, the two additional features of "a plurality of control buttons for remotely controlling the surgery system" and "a work tip couple to the housing" are anticipated by buttons (46, col.7, lines 7-21) and instrument body (32, col.7, lines 22-25).

All other elements described above and the position of obviousness set forth above directly apply to claim 29.

Regarding claim 23, identical elements and features addressed with respect to claim 1 are set forth above. Additionally, Chader et al. disclose an adapter interface (distal end of housing 50 and including engagement tabs 52, Fig.3) coupled to the housing (50) (which is analogous to housing 32 in Fig.2) and a plurality of buttons (46) operatively coupled to the adapter interface (col.7, lines 38-40 which discloses one or more buttons on the housing). The fasteners (e.g., 52) adapt the instrument to interchangeably couple with body (32) (col.7, lines 40-52). All other elements described above and the position of obviousness set forth above with respect to claim 1 directly apply to claim 23.

As to claims 3, 5, 6, 8, 9, 13-23, 25-29, 31-34, 80-84, 86-93, 95, 96, 100, 102, 105 and 106, note the portions of Chader et al. cited above with respect to the claim concerning the information and buttons. As for the "adapted to be used as" claims, these claims do not structurally limit the smart instrument *per se* but describe capable uses when attached to different instruments. Since the attachment (50) of Chader et al. is interchangeable with different instruments, such device also affords such capable uses.

As to claims 4, 7, 10-12, 85, 94 and 97-99, note the reasons set forth in numbered paragraph 11 of the previous Office Action, paper number 13.

Claims 1, 3-23, 25-29, 31-34, 80-100, 102, 105 and 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chader et al. in view of Acker et al. (U.S. Pat. 6,453,190).

Regarding claim 1, Chader et al. discloses an instrument comprising a housing (32, Fig.2 or 50, Fig.3), a plurality of light emitting diodes coupled to the housing (20, Fig.2,col.6, lines 61-63) and being adapted to fire independently (Fig.2, each light emitting diode 20 is independently connected to the controller 44 with a dedicated signal line and thus is "adapted to fire independently"), a memory circuit (36, Fig.2) for storing information related to the instrument (col.6,lines 29-44), and a "transceiver" (signal wires show in Figure 2 as lines between the housing 32 and the system 14) adapted to communicate bidirectionally between the instrument and the system (col.6, lines 45-60). The instrument transmits information stored on the memory circuit in response to a received signal from the system (14) (col.6, lines 49-56).

Chader et al. discloses hard wired transmission of signals and therefore fails to teach that the disclosed transceiver is *wireless*, that the disclosed bidirectional communication is *solely*

through a wireless communication system, and that the disclosed transmission of stored information in response to the received signal occurs *when the smart instrument is placed within a field of detection*. All three of these missing features are directly related and affected by the type (i.e., wired or wireless) of communication used to transmit the signals.

Acker et al. discloses an analogous tracking system (note Abstract) wherein the instrument is tracked using non-ionizing electromagnetic fields (e.g., magnetic). Acker et al. explicitly teaches that although the connection between the device mounted on the instrument (which is analogous to Chader's housing 32 in Figure 2 or 50 in Figure 3) and the position detecting system (which is analogous to Chader's position detecting system 14,16) is hard-wired with a plug, such hard-wired connection can be replaced by a wireless connection (col.11, line 61-col.12, line 4). Acker et al. offers this motivation: to avoid "the physical encumbrance of loose wires trailing from the instrument" (col.12, lines 3-4). In view of this teaching regarding a directly analogous portion of the Chader et al. reference, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a wireless connection in place of the hard-wired connection of Chader et al. In the interest of preserving the integrity of the Chader et al. system, it would follow from the level of ordinary skill that the communication scheme (i.e., bidirectional) would inherently be maintained and all the same signals would still be transmitted between the instrument and tracking system, just wirelessly.

Regarding claim 29, the two additional features of "a plurality of control buttons for remotely controlling the surgery system" and "a work tip couple to the housing" are anticipated by buttons (46, col.7, lines 7-21) and instrument body (32, Fig.3, col.7, lines 22-25).

All other elements described above and the position of obviousness set forth above directly apply to claim 29.

Regarding claim 23, identical elements and features addressed with respect to claim 1 are set forth above. Additionally, Chader et al. disclose an adapter interface (distal end of housing 50 and including engagement tabs 52, Fig.3) coupled to the housing (50) (which is analogous to housing 32 in Fig.2) and a plurality of buttons (46) operatively coupled to the adapter interface (col.7, lines 38-40 which discloses one or more buttons on the housing). The fasteners (e.g., 52) adapt the instrument to interchangeably couple with body (32, Fig.3) (col.7, lines 40-52). All other elements described above and the position of obviousness set forth above with respect to claim 1 directly apply to claim 23.

As to claims 3, 5, 6, 8, 9, 13-23, 25-29, 31-34, 80-84, 86-93, 95, 96, 100, 102, 105 and 106, note the portions of Chader et al. cited above with respect to the claim concerning the information and buttons. As for the “adapted to be used as” claims, these claims do not structurally limit the smart instrument *per se* but describe capable uses when attached to different instruments. Since the attachment (50) of Chader et al. is interchangeable with different instruments, such device also affords such capable uses.

As to claims 4, 7, 10-12, 85, 94 and 97-99, note the reasons set forth in numbered paragraph 11 of the previous Office Action, paper number 13.

(10) Response to Argument

Claims 1 and 29, and the claims dependent thereon ARE rendered obvious under 35 U.S.C. 103(a) by Chader et al.

Before addressing Appellant's specific arguments, the Examiner would like to elaborate on why the Examiner felt it necessary to set forth an obviousness rejection using Chader et al. without use of a specific secondary reference (i.e., using common knowledge instead). Since it was clear from the start that the main issue in the prosecution was only the difference between using generic hardwired and wireless communication (Appellant's invention as claimed does not involve any particular kind of wireless communication, no specific structure that enables wireless transmission and reception of signals, and no specific structure that would be required to modify the hardwired prior art system to use wireless transmission), the Examiner took the position that any particular reference to a specific wireless transmission system was not required in setting out a *prima facie* case of obviousness in that such generic knowledge was inarguably conventionally known at the time of the invention (and there was motivation) and any specific teaching would have inevitably included irrelevant details that allegedly would be argued to take away from or teach away from the combination of such reference with Chader et al. This exact situation has occurred in Appellant's arguments directed to the combination of Chader et al. and Acker et al.¹ Therefore, since the Examiner anticipated this and the general concept and knowledge was inarguably readily available, the conventional information that was within the level of ordinary skill was relied upon to presumably simplify the issues.

¹ Appellant's main argument with respect to the combination of Chader et al. and Acker et al. throughout prosecution has been directed to the fact that Acker et al. uses a different type of detection energy (i.e., magnetic) and thus the teaching relied upon by the Examiner, although considered by the Examiner as directly analogous when applied to Chader et al., is not analogous and would not be considered by one of ordinary skill.

Regarding Appellant's arguments, Appellant suggests that the Examiner has not properly considered either the invention of claim 1 as a whole or the disclosure of Chader et al. as a whole (note page 4, second full paragraph of Appellant's brief). On the contrary, this is exactly what the Examiner has done. Each and every element of claim 1 (and claim 29 for that matter) has been considered by the Examiner, most being anticipated by Chader et al. and the remaining features being addressed with respect to obviousness. Regarding the disclosure of Chader et al., the Examiner has definitely considered the whole disclosure of Chader et al. in that the Examiner recognizes that there is NO teaching or evidence whatsoever in Chader et al. that hard wires are necessary or critical for proper operation of the invention. In fact, it appears that the main focus of Chader et al. is the provision of a memory module for storing information related to the instrument being tracked (note col.2, lines 52-67 and the majority of the Description of the Specific Embodiments). Furthermore, there is NO evidence in Chader et al. or provided by Appellant to preclude one of ordinary skill from considering and being able to use wireless transmission of signals instead of the hard wires.

This lack of evidence perpetuates support for the Examiner's position of obviousness (which is based on knowledge of the art and motivation) in that every form of signal transmission can be categorized as one of only two species: wired or wireless. Chader et al. chose one (wired) and described the actual invention with respect to it without requiring limitation to that one choice. Appellant's suggestion that "If it were an easy expedient, Chader would have described both wired and wireless systems" is not well taken by the Examiner. The lack in Chader et al. of every known obvious design expedient or known obvious alternative to any element or feature of the disclosed device is not a requirement for Chader et al. and

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especially is not a teaching or evidence that such known obvious expedients or alternatives are non-obvious. For example, besides the issue at hand, Appellant would have to agree that use of a memory other than that disclosed by Chader et al. (i.e., EPROM, PROM or PAL chip, col.2, line 67), such as a flash memory or hard drive would not constitute "invention" per the statutes and would definitely not warrant issuance of a U.S. patent on claims wherein that was the only difference. Perhaps the Examiner is being presumptuous here, but he perceives this as being an analogous situation which clarifies the Examiner's position of the issue at hand.

Therefore, it is this Examiner's position that the failure to list all known obvious alternatives or design expedients does not teach away from use of a wireless system. This is NOT a position that it would be obvious to try. It is a position, however, that with a proper teaching (knowledge) and motivation, the modification at issue can be made to the Chader et al. device.

Although Appellant attempts to show that Chader et al. teaches away from a wireless system by pointing out that there is a physical connection between the instrument and system (note end of second full paragraph of page 4 of Appellant's brief), it must be pointed out that a physical connection is inherently required with hardwired transmission, just as a non-physical connection is inherently required with wireless transmission. In a hardwired system, the instrument would not be engaged with the system until the hard wires of the instrument are in direct contact with the wires of the system. In a wireless system, the instrument would not be engaged with the system unless the wireless element of the instrument is in wireless contact with the wireless element of the system. Clearly, "contact" in a wireless sense refers to being in the

inherent range or boundary of the system. It won't work otherwise (e.g., everyone has experience a cell phone that has no signal).

Particularly, the operation of the Chader et al. device would NOT be altered with respect to the recognizing and querying of the device when modified to include a wireless transmission of these signals (note last sentence of second full paragraph of page 4 of Appellant's brief). By definition of a wireless system, these functions would only occur when the instrument can be detected by the system, in other words, when the instrument is within the field of detection. Even more simply put, being in the field of detection (in a wireless system) is analogous to being physically connected (in a hardwired system).

Claim 23 and the claims dependent thereon ARE rendered obvious under 35 U.S.C. 103(a) by Chader et al.

The basis for this obvious rejection under 35 U.S.C. 103(a) over Chader et al. is the same as that for claim 1. Claim 23 recites additional elements and features that are anticipated by Chader et al., as explained in the Grounds of Rejections above. As set forth above, Chader et al. anticipates an adapter interface and one or more buttons. The words "activation" and "release" with respect to buttons do nothing more than given them names (i.e., first button and second button would have been just as appropriate and meaningful) and imply no meaningful structure (note specific language in lines 7 and 9 of claim 23). Chader et al. explicitly discloses that the housing (50) is adapted to be interchanged with an instrument (col.7, lines 40-52).

Since the basis for Appellant's argument is that Chader et al. does not disclose the elements as set forth above, no additional discussion by the Examiner is necessary. The position

of obviousness is the same as that of claim 1 with respect to the wireless transmission of the signals and therefore applies here.

Claims 1 and 29, and the claims dependent thereon ARE rendered obvious under 35 U.S.C. 103(a) by Chader et al. in view of Acker et al.

Regarding the obvious combination of Chader et al. and Acker et al, the Examiner feels that the rejection speaks for itself. It is not clear why Appellant insists on maintaining that the Examiner "has not shown any motivation that would lead one of ordinary skill in the art to modify the teaching of Chader with the teaching of Acker" (page 5, second full paragraph from bottom of Appellant's brief). As shown in the Grounds of the Rejection above, there is a explicit motivation spelled out in the disclosure of Acker et al.

In addition, Appellant confusingly argues that the existence of the wireless magnetic fields for sensing and detecting the position of the device (such fields being analogous to the visible light used for sensing and detecting the position in the Chader et al. device, as well as in Appellant's device) does not teach the skilled artisan to provide a wireless connection between the instrument and tracking system for transmission of data there between. The Examiner agrees and this is why the Examiner did not use such teaching. Instead, Acker et al. explicitly addresses replacement of hard-wires that transmit signals between the instrument and the tracking system (note that signals, besides the wireless ones for sensing and detecting the position, are transmitted between the instrument and tracking system, col.11, lines 9-60 in Acker et al.). These hard-wires are analogous to the hard-wires shown by the plurality of parallel lines (one of

which is numbered as 42) in Figure 2 of Chader et al. And these hard-wires are the ones that Acker et al. teaches can be replaced by a wireless connection.

Additionally, Appellant argues that "it would have been recognized that the amount of data that needed to be transferred between the instrument and the systems necessitated a hard-wired systems for the type of systems as claimed". Obvious, Acker et al. didn't think so (back in 1997). However, Appellant never, throughout prosecution, provided any evidence of this "recognition". In fact, it appears that there is nothing even mentioned in Appellant's disclosure that would suggest an invention in wireless technology *per se*, such invention allegedly required to progress Appellant's invention to the next level over existing hard-wired systems. Usually such lack of disclosure implies or suggest the use of existing technology which is contrary to Appellant's contention that such existing technology was lacking at the time of the invention.

Claim 23 and the claims dependent thereon ARE rendered obvious under 35 U.S.C. 103(a) by Chader et al. in view of Acker et al.

The basis for this obvious rejection under 35 U.S.C. 103(a) over Chader et al. in view of Acker et al. is the same as that for claim 1. Claim 23 recites additional elements and features that are anticipated by Chader et al., as explained in the Grounds of Rejections above. As set forth above, Chader et al. anticipates an adapter interface and one or more buttons. The words "activation" and "release" with respect to buttons do nothing more than given them names (i.e., first button and second button would have been just as appropriate and meaningful) and imply no meaningful structure (note specific language in lines 7 and 9 of claim 23). Chader et al.

explicitly discloses that the housing (50) is adapted to be interchanged with an instrument (col.7, lines 40-52).

Since the basis for Appellant's argument is that Chader et al. does not disclose the elements as set forth above, no additional discussion by the Examiner is necessary. It is noteworthy to point out that, contrary to Appellant's statements, both Chader et al. and Acker et al. disclose the interchangeability feature, although the Examiner did not rely upon this feature in Acker et al. The position of obviousness is the same as that of claim 1 with respect to the wireless transmission of the signals and therefore applies here.

EVIDENCE IN THE FORM OF DECLARATIONS FILED UNDER RULE 132

Appellants' maintain that the Examiner has not properly considered or rebutted the evidence submitted by Appellant's in the form of two declarations filed under Rule 132.

Firstly, the Examiner did indeed properly consider the declarations. The fact that the Examiner did not withdraw the rejections and issue the application is not evidence that proper consideration was not given to such declarations. Without evidence of improper consideration, this position will be given no merit.

Secondly, regarding the Examiner's failure to rebut the alleged evidence, such "evidence" is mostly opinion, in which no rebuttal is possible. The Declarant's approval of "a system that uses wireless hand pieces of the type as claimed in the present invention" in no way proffers evidence of non-obviousness. The benefits listed item 6 showing the results of a "wireless" system are nothing more than what would be expected when replacing a hard-wired system with

a wireless one. Particularly, the alleged unobvious benefits listed in item 6, a through d are the mere result of no hard-wires being present.

Therefore, the Examiner takes the position that the "evidence" submitted by Appellant was indeed properly considered for what it was worth, and deemed to have no effect on the issues at hand.

CONCLUSION

As clearly indicated above, the Examiner has indeed met the burden required by 35 U.S.C. 103(a) to show that the invention of the claims under appeal would have been obvious to one of ordinary skill in the art at the time of the invention based on Chader et al. alone and Chader et al. in combination with Acker et al.

Therefore, the Examiner respectfully asks the Board to affirm the final rejection of the claims in this application.

(11) Related Proceeding(s) Appendix

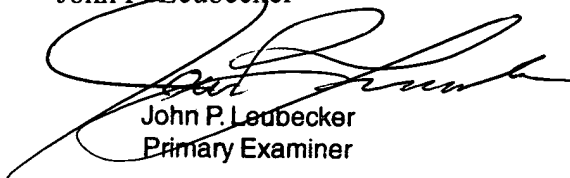
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

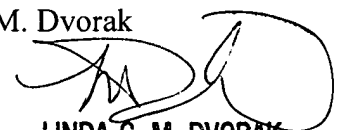
John P. Leubecker



John P. Leubecker
Primary Examiner

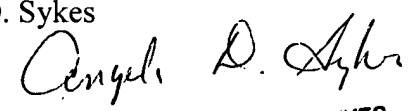
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